

REMARKS

Claims 1-14 are pending in this application. By this Amendment, claims 1 and 7 are amended. No new matter is added. Reconsideration in view of the above amendments and following remarks is respectfully requested.

I. Information Disclosure Statement

An Information Disclosure Statement PTO Form 1449 was filed on January 15, 2002 submitting JP-A-11-58704 for consideration. However, the Examiner has not yet returned a initialed copy of the PTO Form 1449. Applicant respectfully request the Examiner return an initialed copy of the 1449 Form indicating consideration of the reference cited therein.

II. The Claims Define Allowable Subject Matter

Claims 1-5, 7-8 and 10-14 are rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 6,210,245 to Sando et al. in view of U.S. Patent No. 5,157,411 to Takeoshi et al.; and claims 6 and 9 are rejected under 35 U.S.C. §103(a) as unpatentable over Sando et al. in view of Takeoshi et al. and further in view of U.S. Patent No. 6,409,300 to Imanaka et al. These rejections are respectfully traversed.

The applied art does not teach, disclose or suggest that the drive controller determines a waveform for each nozzle group based on a distance between the supply port and each nozzle group, as claimed in claim 1 and similarly claimed in claim 7.

The Examiner admits that Sando discloses controlling of the driving voltage nozzle by nozzle. Controlling the driving voltage nozzle by nozzle is discussed in the present specification with respect to problems of the prior art. That is, if the driving voltage control needs to be changed for each nozzle separately, the circuit configuration must be made complex. Thus, grouping of nozzles as in exemplary embodiments of the present invention, is more appropriate than the disclosure of Sando.

Takeoshi does not make up for the deficiencies of Sando discussed above.

Specifically, in Takeoshi, the recording characteristics of the respective recording elements are corrected by driving means-IC's. This correction is employed so as to correct thickness unevenness occurring in the manufacturing process. Please see column 1, lines 12-46 of Takeoshi. Accordingly, the correction in Takeoshi should be made by memorizing the influence caused by the unevenness. As such, there is no presumption in Takeoshi about the characteristics of nozzles.

In contrast, according to the claimed invention, a waveform for each nozzle group is determined in accordance with the distance between the supply port and each nozzle group. As discussed on at least page 4, lines 19-24 of the specification, this presumption would be reasonable because the ink discharge quantity is influenced by the distance from the supply port to the nozzle. According to the claimed invention, using this characteristic, the correction will be simply accomplished. The feature discussed above with respect to the claimed invention is also described at least on page 14, line 20 - page 15, line 9 of the specification.

There is nothing in either Takeoshi or Sando or the general level of skill in the art to support adding the features of Takeoshi to the invention disclosed in Sando nor is there any clear showing that the resulting combination would correspond to the subject matter recited in claims 1-14. In fact, Applicants respectfully submit that only the present application suggests the claimed combination of features. As such, the asserted combination of Takeoshi and Sando was made using improper hindsight reconstruction of the references.

The features recited in the claims discussed above provide the advantage of adequately suppressing variation in discharge quantity of nozzle groups positioned in different distances from the supply port. As such, with group-by-group regulation, without deriving compensation quantities for each individual nozzle, a simple configuration can be

realized. The applied art does not disclose the features of the claimed invention and thus, cannot provide at least the advantages discussed above with respect to the claimed invention.


For at least the reasons discussed above, Applicants respectfully submit that the applied art does not disclose all of the features recited in independent claims 1 and 7. Thus, the applied art does not render obvious the subject matter of claims 1 and 7. Further, the applied art does not render obvious the features of claims 2-6 and 8-14 depending from claims 1 and 7. Withdrawal of the rejection of claims 1-14 under 35 U.S.C. §103 is respectfully solicited.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



James A. Oliff
Registration No. 27,075

Kevin M. McKinley
Registration No. 43,794

JAO:KMM/jfb

Date: October 28, 2004

OLIFF & BERRIDGE, PLC
P.O. Box 19928
Alexandria, Virginia 22320
Telephone: (703) 836-6400

<p>DEPOSIT ACCOUNT USE AUTHORIZATION Please grant any extension necessary for entry; Charge any fee due to our Deposit Account No. 15-0461</p>
